

REMARKS

Claims 1-25 are pending in the application. Claims 1, 6, 7 and 13 are rejected. Claims 2-5, 8-12 and 14-25 are withdrawn from consideration. No claims are amended or cancelled.

Claim Rejections – 35 USC 102

Claims 1, 6, 7 and 13 are rejected under 35 USC 102(b) as being anticipated by Ference et al (6,285,771). This rejection is traversed for the following reasons.

The Examiner points to Figs. 1-9 of Ference et al as being relevant to the claimed invention and, in particular, identifies element 26 as the claimed “die pad” having a first face and a second face. The Examiner bases his entire analysis on the assumption that element 26’ is a “die pad” as claimed. Moreover, the Examiner points to the two integrated circuit chips 16, 12 as corresponding to the claimed “integrated circuit chip.”

First, the elements 26 and 26’ are expressly stated to be a “heat sink” or “heat slug” made of a material such as aluminum or copper and attached to the chip 16 or directly connected to the chip 12, as taught at col. 3, lines 36-56.

Second, there is no teaching or suggestion that element 26 is a “die pad” as that term is conventionally understood in the art. Indeed, the term “die pad” is not used anywhere in the specification of Ference et al.

Third, the present specification clearly distinguishes between a “die pad” and a heat sink. In particular, the specification, at least at paragraphs 36, 37, 38, 55 and 56, expressly distinguishes between a die pad and a heat sink, and expressly teach the coupling of a heat sink to a die pad. The heat sink cannot be a die pad. In fact, claim 2, which depends from claim 1, specifies that a heat sink is coupled to the die pad of claim 1, thereby indicating that these are defined by the Applicants to be two separate structures. In short, the die pad and heat sink are separate and are neither the same nor even an integrated structure that can be considered to be the same where the terms are used interchangeably.

Clearly, a die pad is missing from the teachings of Ference et al. In the absence of this expressly claimed limitation, the claim cannot be anticipated. "A claim is anticipated only if

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each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (8th Edition), Verdegaal Bros. v. Union Oil Co. of Cal., 814 F.2d 628, 631 (Fed. Cir. 1987).

As to the requirement for an "integrated chip," the claim clearly calls for "an integrated circuit chip," that is, a single chip. However, as clearly illustrated in Fig. 9 and as described in the specification of Ference et al, there are two chips in the relevant embodiments of the reference. The use of two chips expressly precludes correspondence between the structure of Ference et al and several of the limitations in the rejected claims. These include: (1) the arrangement of surfaces of the chip and die, (2) the chip and leads, (3) the chip and bonding wires, and (4) the planar relationship of surfaces of a single chip to other components of the invention, as expressly claimed.

Based on at least these two deficiencies of Ference et al, the analysis of the Examiner and the assumptions made in applying the structure of Ference et al to the claimed invention are erroneous. Applicants respectfully submit that the rejection should be withdrawn and the claims passed to issue.

Claims 1, 6, 7 and 13 are rejected under 35 USC 102(b) as being anticipated by Mostafazadeh et al (5,705,851). This rejection is traversed for the following reasons.

The Examiner points to Figs. 4-6 of Mostafazadeh et al as being relevant to the claimed invention and, in particular, identifies element 54 as the claimed "die pad" having a first face and a second face. The Examiner bases his entire analysis on the assumption that element 54 is a "die pad" as claimed.

First, the element 54 is expressly stated to be a "heat sink" at col. 3, line 66-col. 4, line 32. The "heat sink" is expressly disclosed as being made of a material such as aluminum or copper, at col. 4, lines 10-16.

Second, there is no teaching or suggestion that element 54 is a "die pad" as that term is conventionally understood. Indeed, the term "die pad" is not used anywhere in the specification of Mostafazadeh et al.

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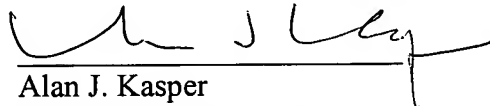
Third, the present specification clearly distinguishes between a "die pad" and a heat sink, as previously noted.

In the absence of this expressly claimed limitation, the claim cannot be anticipated.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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CUSTOMER NUMBER

Date: February 6, 2006